REMARKS

Claims 21-30, 32, 33, 35-38, 41, and 42 are pending in the application. Claims 21-26, 28-30, 32, 33, 35, 37, 38, 41, and 42 were rejected under 35 USC 103(a) as being unpatentable over US patent 6,499,001 (Meyer) in view of US patent 6,920,502 (Araujo). Claims 27 and 36 are rejected under 35 USC 103(a) as being unpatentable over Meyer in view of Araujo, and further in view of US patent application publication 2004/0010560 (Sandage).

Claims 21 and 30 are amended No new matter is added. Applicants' paragraph numbers mentioned herein are relative to the substitute specification.

Response to rejections under 35 USC 103(a):

The following is a summary of the Examiner's correspondence of Meyer's elements to those of Applicants, as best understood by the Applicants.

APPLICANTS' ELEMENT	MEYER'S ELEMENT
1 system	10 system
2 server	14 instruction processing server
3 engineering application	36, 38, 40 Engineering Run Request modules
4 first client	12 request entry device
5 automation devices	16 process station device
6 first mechanism on server receives data from 5	interface card in server 14
7 second mechanism on client links 3 to 5	28 of element 12
8 communication channel	22 communication network
9 data transmission device or system	44 Internet or company multi-site intranet
12 interface in 6 for communicating with 8	? assumed - none shown or described
13 interface in 6 for communicating with 3	? assumed - none shown or described

1) At bottom of page 3 of the office action, Examiner considers that Meyers interface 28 of his request entry device 12 links his applications (his engineering run requests ERR) to automation devices (his process station device 16). However, this is not the case. His interface 28 in his request entry device 12 links his applications ERR in the instruction processing server 14, not to his process station device 16, but to his request entry device 12.

2) Using Examiner's proposed correspondence in the above table, Meyers does not provide a first client for directly accessing process and control data on automation devices as recited in claims 21 and 30. Meyer's first client (his request entry device 12) accesses an instruction processing server 14 and a database server 18. His first client 12 does not directly access the process station device 16. Instead, processing instruction changes are entered at his first client 12, and then transmitted to the instruction processing server 14, which processes the changes, then transmits special-processing instructions to the process station device (abstract: "*The system includes a request entry device through which requesting personnel may input special processing information indicating a way to process the materials differently from a normal way of processing of the materials. An instruction processing device receives the special processing information and generates the special-processing instructions based thereon. A process station device receives the special-processing instructions, and presents the special-processing instructions to material-processing personnel.*") This is an indirect access route between the first client 12 and the process station device 16. The change information entered at client 12 is not directly transmitted to the process station device 16.

For transmissions in the other direction, the process station device 16 stores test measurements in a database server 18. An information retrieval device 20 can later search for these results in a relational database (abstract: "*Further, the system makes the results of the engineering experiment readily available to the company community in the relational database. By accessing the database, company engineers may view the results of previously-conducted experiments,*"). Again, this access is indirect. There is no direct access by either the request entry device 12 or the information retrieval device 20 to process data in the process station device 16.

Thus, accesses in both directions between Meyers request entry device 12 and his process station device 16 are indirect. In one direction, they must go through intermediate processing

and a second transmission. In the other direction they must go through storage in a database then a search and retrieval from the database. Applicants' feature of direct access of automation device process data in real time from a client or server anywhere in the system is completely lacking in Meyer.

3) Meyer's process station device 16 is a computer or network terminal that provides operating instructions to manufacturing personnel (col. 4, lines 27-30: "*a process operator uses a process station device 16 to receive process instructions from the central instruction processing server 14 , and to input information in regard to the process station.*"). Examiner considers this device 16 to be Meyer's "automation devices". If instead, one considers the actuators and sensors of a manufacturing process as the "automation devices" then there is a further level of indirection in Meyer. One such sensor is mentioned in Meyer in col. 7, lines 16-23: "*Some process steps require data to be collected that characterizes some property of the processed material. According to the invention, such data is downloaded from a test instrument at the process station to the process station device 16, such as over an RS- 232 bus. Preferably, the ERR processing module 40 writes this data to memory in the process station device 16 where it is stored for later download to the relational database 30.*" This sensor is twice removed from the information retrieval device 20. In Meyer's preferred form, data from this sensor is at least twice delayed: 1) preferably stored in the process station device 16; 2) transmitted and stored in the relational database; 3) retrieved by a search from the relational database. This clearly cannot be a real-time process.

No such indirection between the Applicants' automation devices 5 and the first client 4 exists in the present invention as claimed. That is why the term "directly accessing" is used in the claims. Furthermore, a purpose of the invention is to provide real-time access to process data of the automation device from anywhere in the system and to remote clients. The independent claims are further clarified in this respect herein to include the term "real-time". Per Applicants' page 9, lines 17-18: "*Process data or diagnostic data can also be transmitted in realtime.*" Per Applicants' par 21, lines 8-13: "*Engineering actions as well as information-gathering and maintenance operations can be carried out from different locations within the system 1 since all the data is available in realtime at any time and everywhere via the online*

RDP communication channels 8 and the internet 11." This clearly cannot be done in Meyer's system.

4) Meyer uses a client-server topology for central control and central access. Changing this to Applicants' peer-to-peer system would completely change Meyer's topology, and would be a disadvantage to Meyers' main goals: 1) To properly sequence and automatically check the presentation of special processing instructions to human operators; 2) To centrally store special processing instructions and the test results thereof to avoid duplication of experiments. The sequencing, presentation, and checking of special processing instructions is accomplished by an intermediate processing stage in a central instruction processing server (abstract "*An instruction processing device receives the special processing information and generates the special-processing instructions based thereon.* "). In col. 2, line 60 to col. 3, line 5: "*The process station device receives the action from the instruction processing device, presents the action to the material-processing personnel, and receives input from the material-processing personnel indicating that the action is complete. Based on the input from the material-processing personnel indicating that the action has been completed, the process station device generates an action-complete indication and provides the action-complete indication to the instruction processing device. Only after the instruction processing device has received the action-complete indication associated with the most previous action does it provide a next action from the sequential list to the process station device.*" The storage and retrieval of instructions and related results of completed experiments is done in a central database 30 to avoid duplication of effort. Neither of these operations works as a virtual peer-2-peer communication for real-time communication between the participating clients to access and configure one client system from another client system as recited in claim 31 herein.

Conclusion

M.P.E.P. 2143.04 provides that to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered for judging the patentability of the claim against the prior art. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.

As argued above, Meyer lacks limitations of the independent claims herein. The proposed combinations with Araujo and Sandage do not provide these missing elements. The proposed modification of Meyer into a peer-to-peer topology is unmotivated, inoperable as to central control of processing instructions and a central database to avoid duplication, and would not produce the claimed invention. Thus the proposed combination does support the obviousness rejections of the claimed invention. Accordingly, Applicants feel this application is in condition for allowance, which is respectfully requested.

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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